



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

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February 20, 1986

CERTIFIED RETURN RECEIPT REQUESTED  
(P592 431 332)

Mr. A. J. Cornell  
President  
Castle Valley Mining Company  
P. O. Box 1240  
Castle Dale, Utah 84513

**FILE COPY**

Dear Mr. Cornell:

RE: Completeness Review of MR-1 Application, Mining and  
Reclamation Plan, White Cap #7 Mine, PRO/015/033, Emery  
County, Utah

The Division has completed its review of Castle Valley Mining Company's MR-1 permit application for the White Cap #7 gypsum mine (received December 27, 1985). The following review comments identify specific technical deficiencies which must be addressed by the applicant before the permitting process can continue.

Soils Concerns:

Rule M-3(1)(g) - JSL

The submitted map which identifies the disturbed area for the proposed mining operation is of insufficient scale to clearly identify the details of the site. The applicant should delineate the topsoil stockpile on a topography map at a scale of 1" = 500'. The relation of the topsoil stockpile to all ephemeral and intermittent stream channels must be clearly portrayed. The operator should delineate the annual mining sequence on this topography map. If the applicant is going to reclaim 12 to 15 acres each year, will the topsoil removed during the following years be stockpiled in the same location as the preceding year? The Division recommends that the topsoil removed during the first year be stockpiled for

Page 2  
Mr. A. J. Cornell  
PRO/015/033  
February 20, 1986

life of the mine. Topsoil removed each year thereafter would then be placed upon the preceeding years site disturbances. Also, if the area is to be reclaimed annually, how will the operator get to the area designated for mining in the following year? What roads will be maintained until final reclamation? Will the conveyor system be moved annually? The applicant should also develop a postmining contour map at a scale of 1" = 500'. What is the exact acreage of total disturbance?

Rule M-10(14) - JSL

For final reclamation the operator should analyze three soil samples prior to any excavation. The analyses would help determine what amendments and/or fertilizer rates would be required at the time of reclamation. The three soil samples should come from the following: (1) the surface material overlying the gypsum outcrop; (2) the material underlying the gypsum bed at a six inch depth; and, (3) the topsoil material from a small ravine within the mining boundaries, at a depth of six inches. The laboratory analysis for all three samples should include the following: nitrogen, available phosphorous, potassium, calcium, magnesium, iron (EDTA method), boron and electrical conductivity.

The applicant must thoroughly describe the operative procedures and plans for topsoil removal, storage, preservation and redistribution. Based on site analysis January 23, 1986, (Division of Oil, Gas and Mining [DOGM] field site visit) it was determined that the topsoil removal depth should be variable. A total six inch depth of topsoil should be removed from all gypsum outcrop locations. In those areas where topsoil has accumulated (ravine, depression, etc.), the removal depth should be increased to a one foot lift.

The applicant should include a narrative describing what protective measures will be employed to stabilize the topsoil stockpile. If applicable, include mulch type/rates, seed type/rates or any other protective amendment that will be utilized.

The depth of final topsoil redistribution will ultimately depend on the depth of topsoil removal. The MR-1 form indicates a final redistribution depth of 10 inches - 12 inches yet only six inches of material should be removed from a larger

Page 3  
Mr. A. J. Cornell  
PRO/015/033  
February 20, 1986

part of the mine area. The applicant should to calculate the acreage of those areas where six inches of topsoil will be removed and the acreage where 12 inches will be removed. The material underlying the gypsum bed must also be described. What is the chemical and physical characteristics of this underburden? What operative procedures or materials will be used to help adhere the redistributed topsoil to be underburden? Will ripping be implemented? Will organic materials be tilled into this material or the topsoil?

Reclamation Concerns:

Rule M-3(2)(a) Land Use - KMM

The applicant should consider wildlife habitat as at least a secondary land use in the project area. Some estimate of surface resources of the site and vicinity should be included in the statement of land use. The Bureau of Land Management (BLM) or Soil Conservation Service (SCS) should be able to supply an estimate of productivity (AUM's or lbs/acre) or range condition. Are there any range improvements in the area that may be impacted by the mining or milling operation?

Rule M-3(2)(e) Planting Program - KMM

The applicant should commit to stabilizing the land as soon as possible after disturbance. Reclaiming 10-12 acres at a time is acceptable if that many acres are disturbed each year. If the advance of mining is slower, the operator should stabilize the topsoil pile and disturbed area with a temporary cover crop.

Because of the limited amount of topsoil available and the small mass of vegetation, a separate step of vegetation removal could be eliminated. Vegetation and topsoil could be graded into a single pile. Eventual deterioration of the vegetation will enrich the soil material. The limited amount of topsoil could also be extended and enriched by incorporating additional organic material. Local available old/rotten hay would be an excellent addition to the planting program.

Using "standard farming practices" will be generally suitable on this gently sloping site. The applicant should add to these practices ripping of the subsoil before topsoil is replaced prior to planting. Ripping will improve root penetration.

Page 4  
Mr. A. J. Cornell  
PRO/015/033  
February 20, 1986

Rule M-3(12)(2) Revegetation Success Standards - KMM

The success of revegetation (and approval of final bond release) is based on a comparison between the revegetated area and similar vegetation communities near the mine. Reclamation will be judged successful only when the revegetated areas have at least 70 percent of the cover of the reference area. Before the mining area is disturbed, an area of similar vegetation which will not be disturbed should be designated as the vegetation reference area and indicated on the site map. A more precise estimate of vegetation cover on the mine site "using professionally accepted inventory techniques" should be made. The 60-80 percent vegetation cover indicated in the MR-1 (#20) appears to be high and would be a difficult success standard to meet in this dry area.

The applicant has mentioned the potential need for fencing of the mine area. Considering the heavy grazing in the vicinity, fencing to protect newly planted areas will probably be necessary to establish adequate vegetation.

Hydrology Concerns:

Rule M-3(1)(c)-(e) - DMW  
Rule M-10(8)

The proposed permit area is drained by a number of small ephemeral channels and gullies. In order to assess the possible hydrologic effects of mining on the permit area and adjacent area, it is important to determine the approximate location of these drainages in relation to proposed mining structures and activities.

The applicant must submit a map of adequate scale (1" = 500' or more detail) which clearly identifies such existing features as natural ephemeral channels and gullies, directional flow of surface (runoff) water and any constructed diversions. The map must clearly indicate details of the proposed mining operations including the location of the processing building, primary crusher, conveyor, generators, topsoil stockpile, truck loading pad and access road. The location of any proposed surface runoff and erosional control measures (i.e., berms, diversions, sediment basins, silt fencing, culverts, etc.) should also be clearly identified on the site facilities map.

Page 5  
Mr. A. J. Cornell  
PRO/015/033  
February 20, 1986

Bonding Concerns:

Rule M-5 - PGL

The BLM requests a \$25,000.00 reclamation surety bond. The applicant must submit a detailed reclamation cost estimate to the Division. This cost must represent a third party cost to perform the reclamation. The cost references are the Means Cost Index and the Rental Rate Blue Book. Please refer to the attached bond estimate form as a guide for developing a breakdown of your cost estimate.

Engineering Concerns:

Rule M-10(2)(b) - PGL

The applicant states that trash and debris will be removed to nearest dump. Where is this authorized landfill? Will there be a designated area onsite for garbage? Please indicate where? A dumpster?

Rule M-10(2)(c) - PGL

With reference to the warning signs that will be posted, what will they say? Will they be maintained? Where will they be posted?

Rule M-10(2)(e) - PGL

Rule M-10(5)

The applicant states that few highwalls will be developed? Where will they possibly be developed? How will they be reclaimed?

Rule M-10(7) - PGL

Who maintains the access roads? Will they be removed after mining? What is the extent of applicant responsibility to reclaim roads.

Rule M-10(9) - PGL

Are there any structures onsite that will need to be removed at the time of reclamation? If so, please describe them.

Page 6  
Mr. A. J. Cornell  
PRO/015/033  
February 20, 1986

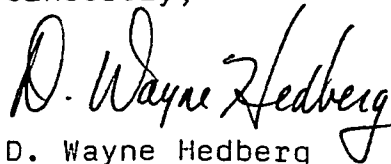
As of our meeting on February 14, 1986, it is our understanding that the mill site will no longer be situated on the mine site property. Consequently, the Division will no longer be involved in the permitting process for the new mill site location near Castledale. Permitting of the mill site and ancillary facilities will most likely involve the majority of the following agencies: the State Division of Environmental Health (or county office), the Division of State History, the State Division of Water Rights (or county office), the county zoning commission, and the Bureau of Land Management. The applicant should contact each of these agencies to confirm necessary permitting requirements.

Also enclosed, please find copies of the following forms for use in preparing your response to the deficiencies outlined above:

- a) a blank MR-1 form (to amend your previous application)
- b) guideline for noncoal maps
- c) mined land reclamation checklist [minimal requirements which an application should address (use as a reference or guide)]
- d) bond estimate form (reclamation cost breakdown)

If possible, please provide a response to the comments outlined above by March 15, 1986. An expeditious response will help speed the permit review and approval process. Your cooperation and assistance in finalizing this permitting activity is appreciated. Should you have specific questions or need additional information, please contact me.

Sincerely,



D. Wayne Hedberg  
Permit Supervisor/  
Reclamation Hydrologist

enclosures

DMW/btb

cc: Lowell Braxton      Pam Grubaugh-Littig  
Dennis Dalley      James Leatherwood  
Gene Nodine      Kathy Mutz  
Dave Wham

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